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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,713

10/22/2003

Steve A. Jacob

200207564-1

6864

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06/13/2006

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EXAMINER

PHAM, HAI CHI

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,713

Applicant(s)

JACOB, STEVE A.

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 9-12, 14-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tosaka et al. (Pub. No. U.S. 2002/0058193) in view of Steele (U.S. 5,025,292) and Fukutani (U.S. 6,892,038).

Tosaka et al. discloses a toner and image forming method for creating photographic and text images in an electrophotographic image forming device, comprising providing a set of color toners (developing devices 41-44 containing yellow, magenta, cyan and black toners, respectively), said set comprising a toner having high cyan pigment load, a toner having a high magenta pigment load, a high yellow pigment load, providing a black toner having black pigment (each of the color toners having a high load of respective pigment set at 2-30 weight percent), providing a first set of image output terminal settings to deliver a partial amount of color toners to a target media, and providing a second set of image output terminal settings to deliver a complete amount of color toners to said target media (the color toners are sequentially deposited on the surface of the photosensitive drum 1 to develop the latent image formed on it, and the superposition of the toners forms the full-color image) (Fig. 1).

However, Tosaka et al. fails to teach the fusion of the first and partially- toned image.

Steele discloses a method and apparatus for forming a multi-color image by forming a first toned image followed by the fusion of the partially toned image at the heating station (31), the recording that has the fused partially-toned image is reversed so that a second and different toner can be deposited on the fused partially-toned image to obtain a second partially-toned image, which is again fixed by the heating station (31), the same process is repeated until a full-color toner image is formed (col. 3, lines 3-21) (col. 6, lines 9-45).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Tosaka et al. by repeatedly fusing the partially toned image until the full-color image is obtained as taught by Steele. The motivation for doing so would have been to prevent the contamination of the successive toned image by the previous toning operation as suggested by Steele at col. 7, lines 48-55.

Tosaka et al. also fails to teach the increase of the speed of the fuser roller.

Fukutani discloses the conveying speed of the fixing unit being increased to be higher to the process speed to reduce an amount of loop (col. 5, line 66 through col. 6, line 18).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to increase the speed of the fixing roller in the device of Tosaka et al. as taught by Fukutani for the purpose of smoothly conveying the recording

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paper through the fixing roller while preventing the formation of an excessive amount of loop.

Tosaka et al. further teaches:

- Transferring at least one said color toner to said target material (the full-color image being transferred from the intermediate transfer belt 5 onto the recording medium P),
- Transferring said black toner to said target media (the toner colors being superposed on each other),
- The target material being paper (plain paper P).

With regard to claim 15, Tosaka et al. fails to teach the color toners having a pigment load of from 40 to 60 weight percent. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the pigment load of each color toner at between 40 to 60 weight percent as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

3. Claims 2, 5-7, 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tosaka et al. in view of Steele and Fukutani, as applied to claims 1, 12, 17 above, and further in view of Caruthers, Jr. et al. (6,002,893).

Tosaka et al., as modified by Steele and Fukutani, discloses all the basic limitations of the claimed invention except for the addition of one or more colors

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selected from red, blue and green or CMY pigments, the addition of the color toners to increase the pigment load by about 1 to 200 percent.

Caruthers, Jr. et al. discloses high and low pigment loadings for custom colors used in an electrophotographic printing system, wherein colorants such as pigments black, cyan, magenta, yellow, red, blue, green and mixtures of any one colorant comprise from 0.1 to 99.9 percent of the colorant mixture so as to increase pigment mass per unit area to obtain a desired custom color (col. 14, lines 21-46).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form mixture of desired colorants in the device of Tosaka et al. as taught by Caruthers, Jr. et al. The motivation for doing so would have been to extend the color gamut for use in the printing system.

Response to Arguments

4. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new grounds of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



HAI PHAM
PRIMARY EXAMINER

June 8, 2006